

# Double-Subject Constructions and Marked Case Assignment in Korean\*

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## 1. Introduction

The so-called 'double subject construction' (hereafter DSC) of Korean has attracted many linguists' attention since it is contrary to usual linguistic assumptions for a simplex sentence to have two subjects. Despite the attention it has received, however, its morphosyntactic characteristics have been poorly understood. A closer analysis of the constructions roughly classified as DSCs will reveal that not all the nominative-case marked NPs bear the grammatical relation 'subject' and that apparently similar constructions require quite different syntactic treatment. In this paper, I will examine the case marking of Korean with respect to the DSCs and address some other issues concerning DSCs. Then it will be claimed that the surface case markings must be distinguished from grammatical relations such as subject and object. It will also be pointed out that adjectival predicates behave differently from nonadjectival predicates in case assignment.

In section 2, a general pattern of case assignment in Korean will be sketched. Section 3 is devoted to the discussion of DSCs. First, it will be noted that previous characterizations of DSCs are not clear enough to distinguish DSCs from other, similar constructions. For a more precise syntactic characterization of DSCs, in section 3.1 a distinction between DSCs and topic constructions will be drawn, based on the kinds of predicates allowed in them. In section 3.2, previous attempts to derive DSCs from a non-DSC source (i.e. a possessive construction) will be examined and rejected. In section 3.3, the subjecthood of the nominative NPs will be examined on the basis of subject honorification, and it will be claimed that the second nominative NP in the psychological verb construction does not have the grammatical relation of subject. Throughout the discussion in section 3, I will argue that adjectival predicates behave differently from genuine verbs: only adjectival intransitive predicates figure in DSCs, and adjectival transitive predicates assign their object NP the nominative case. In section 4, an apparent alternative case assignment in a multi-verb construction is examined and is accounted for as a result of the interaction between surface structural ambiguity and adjectival predicates. Finally, in section 5 I examine how marked case assignment in Korean can be accounted for in a categorial grammar framework.

## 2. Case assignment in Korean

Before pursuing our analysis of the DSC, a brief statement concerning case marking in Korean is in order. The examples in (1) are relevant to the following discussion:

- (1) John-i pab-ul mek-ko-iss-ta  
-NM rice-ACC is eating  
'John is eating rice.'
- (2) Mary-uy oppa-ka o-ass-ta  
-GEN brother-NM come-PAST  
'Mary's brother came.'
- (3) [Mary-wa John]-i o-ass-ta  
-and -NM come-PAST  
'Mary and John came.'
- (4) nay-ka [Mary-wa John]-ul po-ass-ta  
I-NM -and -ACC see-PAST  
'I saw Mary and John.'

There are two nominative markers (NM), *i* and *ka*, two accusative markers (ACC), *ul* and *lul*. The first member of each pair occurs after a noun ending with a consonant and the second member occurs after a noun ending with a vowel. The genitive case marker (GEN) is *uv*, and the noun phrase conjunction is *wa*.<sup>4</sup> When conjoined NPs serve as the subject or the object of the sentence, the relevant case markers are realized after the whole coordination, as illustrated in (3) and (4).

Treating case markers as inflectional affixes, the following simplified GPSG-type rules and accompanying morphological operations may be stipulated to account for case assignment in the above examples.<sup>5</sup>

- (5) GPSG PS rules:  
 S --> NP[NM], VP  
 VP --> V[1]  
 VP --> NP[ACC], V[2]  
 NP --> NP[GEN], N'  
 NP --> NP[wa], NP
- (6) Morphological Realization Rules (RR) and Operations (OP)  
 RR 31: In the context of [+N, -V],  
       [CASE:NM] is realized by operation 31.  
 RR 32: In the context of [+N, -V],  
       [CASE:ACC] is realized by operation 32.  
 OP 31: Suffixation of /i/ when it is preceded by a consonant, or  
       suffixation of /ka/ when it is preceded by a vowel.  
 OP 32: Suffixation of /ul/ when it is preceded by a consonant, or  
       suffixation of /lul/ when it is preceded by a vowel.

These rules and operations can correctly account for the case assignment and the close correlation between cases and grammatical functions of the NPs in the above examples: typically, subject NPs are nominative-case marked, while objects of transitive verbs are accusative-case marked. However, they cannot account for case assignment in DSCs, since no commonly assumed rules such as those in (5) and (6) allow two nominative marked NPs in a simple sentence.

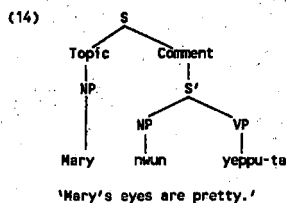
According to Park (1973: 63), one of the earliest papers on the DSC, the DSC is a sentence construction 'which contains two or more subjects, but not in the sense of coordination or subordination'. Thus, in the following examples, (7) is a normal compound sentence and (8) is a complex sentence including a relative clause. The PS rules stipulated above can be easily expanded to accommodate sentential conjunction and relative clauses. On the other hand the DSCs of type (9) are unique in that a seemingly simple sentence apparently contains two nominative-case marked NPs. In many studies of this construction, the two nominative NPs have been considered subjects; hence the term 'Double Subject'.

- (7) John-i o-ko Mary-ka ka-n-ta  
       -NM come-and -NM go  
       'John comes and Mary goes'
- (8) John-i nay-ka salangha-run salam-i-ta  
       -NM I-NM love-REL person-is  
       'John is the person (whom) I love.'
- (9) a. ce salam-i son-i khu-ta  
       that man-NM hand-NM big  
       'That man is big-handed' or 'It is that man whose hand is big'
- b. cangmi-ka kkoch-i yeppu-ta  
       rose-NM flower-NM pretty  
       'Roses have pretty flowers' or 'It is the rose whose flower is pretty'



interest here is primarily in the construction exemplified in (9) and (10) in which adjectival intransitive verbs are used. In the following discussion, then, the label 'DSC' will refer to this construction (and not to those illustrated in (11) and (12)), unless otherwise indicated.

Park's analysis represented in (13) is structurally almost the same as Li and Thompson's (1975) claim that sentences like (9) and (10) should be analyzed in terms of topic-comment relations, as roughly represented below:



The only difference between Korean and English is that while English uses periphrastic constructions involving words like 'as for' to mark a constituent as topic, Korean uses a suffixal topic marker, nun/un.

Obviously, the gapped topic construction is distinguished from DSCs by the fact that no gaps are present in DSCs. Therefore, if DSCs are similar at all to topic constructions (in that the embedded sentence is 'about' the first nominative NP, just as the comment is 'about' the topic), it must be similar to the gapless topic construction, and both constructions must be admitted by a PS rule like (19):

(19) S --> NP[NM/TP] S

This PS rule will admit any sentence preceded by an NP which can be either topic marked or nominative marked. If there is any grammatical relation between the first NP and the following sentence, it is to be pragmatically, rather than syntactically, established.

However, there is one striking difference between the gapless topic construction and the DSC, and which is not captured by a simple PS rule like (19). The predicates of DSCs are restricted to a small subset of verbs, i.e. so-called adjectival verbs, whereas the gapless topic constructions impose no such morphosyntactic constraint on the predicates of the comment clause. This fact has not been clearly stated in most previous studies (cf. Park 1973, 1982, Yim 1984, Chun 1986, Yoon 1986), in spite of the fact that virtually all of their DSC examples were built on the adjectival predicates.

Despite the traditional distinction between adjectives and verbs in many Korean reference grammars, adjectives and verbs are not formally distinguished categories in Korean syntax: both can serve as predicates of a sentence, and both can be marked in such inflections as tense and subject honorific agreement. For instance, phu 'big' and yeppu 'pretty', as in (9), serve as predicates of the sentences, without being modulated by copular verbs.

At first glance, then, what distinguishes DSCs from the topic constructions seems to be the stativity of the DSCs' predicates, as suggested by the fact that they cannot be used with the progressive aspect or with the imperative:

- (20) a. \*John-i kho-ka kil-ko iss-ta  
           -NM nose-NM long PROG  
           'John's nose is becoming long.'  
       b. \*kho-ka kil-ala  
           nose-NM long-IMP  
           'Be long-nosed.'

However, the non-occurrence of such predicates with the progressive aspect or with the imperative has nothing to do with the DSC, since it is naturally accounted for as a result of semantic incompatibility. Thus, in the following example, the transitive verb talm 'resemble' does not occur in the DSC, despite its stative character.

- (21) \*John-i kho-ka pinokchio-uy kho-lul talm-ass-ta.  
       -NM nose-NM Pinocchio-GEN nose-ACC resemble-PAST  
       'John's nose resembled Pinocchio's.'

In fact, no example of DSCs in previous studies involves a typical transitive verb like tayli 'beat', or cuki 'kill', as in the ungrammatical (22). However, it is not simply transitivity of the predicates that figures in DSCs. Even intransitive verbs like kelcka 'walk' as in (23) and ca 'sleep' do not occur in DSCs:

(24) a. mukep 'heavy' ==> kacang mukep 'the most heavy'  
               ==> mukep-ke 'heavily'

b. culkep 'happy' ==> kacang culkep 'the most happy'  
               ==> culkep-i 'happily'

Despite its formal similarities to DSCs, the gapless topic construction imposes no similar constraint on the verbs appearing in it. Accordingly, the nominative case of the first NPs in DSCs can always be replaced by the topic marker. The same is not true of either of the types of topic construction.

- (25) cenyek-un/\*i ce salam-i pulkoki-lul sacu-ess-ta  
dinner-TP/\*NM that man-NM beefsteak-ACC buy-PAST  
'As for dinner, that man bought (me) beefsteak.'
- (26) khong-un/\*i nay-ka cohahanta.  
bean-TP/\*NM I-NM like.  
'Beans, I like.'

### 3.2. Derivation from genitive constructions?

(27) a. ce salam-i son-i khu-ta                      ce salam-ty son-i khu-ta  
           that man-NM hand-NM big-DEC            <==>    that man-GEN hand-NM big-DEC  
           ‘That man is big-handed.’                      ‘That man’s hand is big.’  
       b. cangmi-ka kkoch-i yeppu-ta            cangmi-ty kkoch-i yeppu-ta  
           rose-NM flower-NM pretty               <==>    rose-GEN flower-NM pretty  
           ‘Roses have pretty flowers.’                ‘Rose flowers are pretty.’

Linguists who assume a derivational relationship between DSCs and the corresponding genitive constructions include Kang (1988) and Chun (1986), among others. On the other hand, other linguists (Yim 1985, Park 1973, 1982, Yoon 1986) posit no derivational relationship.

Yim (1985) and Yoon (1986) argue against the derivational view from a GB point of view, while Kang (1988) and Chun (1986) argue for a 'possessor ascension' analysis within a Relational Grammar framework. I will not make any detailed review of their analyses, except to point out one significant limitation of their arguments. Regardless of the frameworks in which their arguments are couched, there is one defect common to all the previous analyses: their theory-internal arguments for or against possessor ascension are mainly directed toward the relationship between the first and the second NP, paying no attention to the types of verbs or the internal structures of the predicates in DSCs.

For example, a typical GB-minded argument against movement/possessor-ascension analysis goes like this: 'one has to raise the most deeply embedded Specifier in *severe violation of Subadjacency*...the possibility of parameterizing bounding nodes or of positing an escape hatch is not available since the movement is unbounded and the extraction is from NPs where no independent escape hatches exist' (Yoon 1986: 216; italics added).

Any argument about the relation between the NPs involved would be meaningful only if other things are kept constant. However, as we have noted in the previous section, only adjectival verbs are compatible with DSCs. Obviously, this is not a kind of syntactic constraint which can be imposed upon just any sentence. That is because syntactically, a VP must be compatible with any subject, regardless of the internal structure of the subject NP. The unacceptability of the DSCs in (22) and (23) is then attributed to the lack of adjectival verbs. Notice however that the corresponding sentences, (28) and (29), in which the first and the second NP are in the genitive construction, are perfectly grammatical.

- (28) Mery-uy /\**ka* apeci-ka ku salam-ul *cuki*-ass-ta  
 -GEN/\*NM father-NM the man-ACC kill-PAST  
 'Mery's father killed the man.'

- (29) John-uy /\**ka* tongseyng-i *ka*-ko iss-ta  
 -GEN/\*NM brother-NM go PROG  
 'John's brother is going.'

Therefore the adjectival predicate requirement seems to be specific to the DSC, and needs to be motivated independently of the corresponding genitive constructions. The possessor-possessed relations between the two nominative NPs in DSCs must, then, be understood as one of the pragmatic constraints associated with DSCs.

### 3.3. Subjecthood of the nominative NPs

As indicated by the traditional term 'double subject constructions', the two NPs in DSCs have often been assumed to be subjects. This assumption is reflected in Park's (1973, 1982: 656) claim that 'the first NP is predicated by the rest of the sentence, which in turn takes the form of a sentence whose subject is the second NP'. This issue of the subjecthood of the nominative NPs is important not only in understanding the nature of DSCs, but also in distinguishing DSCs from other similar constructions like psychological verb constructions, as briefly noted earlier.

The subjecthood of the second NP with respect to the final verb is less controversial than the subjecthood of the first NP. Kang (1988)'s recent analysis of the DSC makes an explicit claim that the first NP is a subject. In addition, any analysis of DSCs involving possessor ascension (e.g. Chun 1986) can also be viewed as making a similar claim, since in the possessor ascension analysis, the ascended possessor assumes the grammatical relation previously borne by its host (in keeping with the Relational Succession Law). Rejecting this analysis, Yoon

(1986) proposed that the first NP is in the nominative case but does not bear the grammatical relation of subject.

Defining the grammatical relation of subject in languages like Korean is not easy, since neither case marking nor position serves to uniquely identify subjects (as they do in most European languages). To make matters worse, any NPs can be omitted if they are recoverable from the context, and subordination of a clause is not syntactically distinguished from coordination. Therefore it is very difficult to find an unambiguous subjecthood test.

The only available test for subjecthood seems to be subject honorification, whereby the predicate of a sentence is expected to agree with the subject in terms of honorification, as below: (HON is for an honorific marker; and CON for a contempt marker which indicates the speaker's contempt or superiority, instead of deference, to the referent of its host NP.)

- (30) a. *sensayng-nim-i ka-si-n-ta*  
 teacher-HON-NM go-HON  
 'The teacher is going.'
- b. *sensayng-nim-i totuk-nom-ul ttayli-si-ass-ta*  
 teacher-HON-NM thief-CON-ACC hit-HON-PAST  
 'The teacher hit the thief.'
- c. *totuk-nom-i sensayng-nim-ul ttayli-ass-ta/\*ttayli-si-ass-ta*  
 thief-CON-NM teacher-HON-ACC hit-PAST /\*hit-HON-PAST  
 'The thief hit the teacher.'

As seen in (30a) and (30b), a subject NP which denotes a person to whom the speaker wishes to show deference is elevated by such honorific markers as *nim* and *si*. *Nim* is the honorific personal marker, whereas *si* is the verbal honorific agreement affix. *Nom* is a personal noun to whose referent the speaker shows superiority or contempt. In (30c), the subject is 'contempted', while the object is elevated with the honorific marker *nim*. But such honorification of the object does not trigger honorific agreement on the verb.

### 3.3.1. Subject honorification and the DSC

Now let's look at DSCs with respect to subject honorification.

- (31) a. *Kim sensayng-nim-i son-i khu-si-ta*  
 teacher-HON-NM hand-NM big-HON  
 'Prof. Kim is (esteemedly) big-handed.'
- b. *[Kim sensayng-nim-uy son]-i khu-(\*si)-ta*  
 teacher-HON-GEN hand-NM big-(\*HON)  
 'Prof. Kim's hand is (\*esteemedly) big.'

Honorification of the first NP seems to trigger the verbal honorific agreement in (31a). As the corresponding genitive construction in (31b) suggests, the non-human second NP, *son* 'hand', does not act as such a trigger. On the other hand, in the next example, it is the second nominative NP, rather than the contempted first nominative NP, which triggers the honorific agreement:

- (32) *ce totuk-nom-i enemy-nim-i aphu-si-ta*  
 that thief-CON-NM mother-HON-NM sick-HON  
 'That thief's mother is (esteemedly) sick.'

It seems then that both nominative NPs can trigger the honorific agreement on the verb. Therefore, both NPs are viewed as bearing some subject property according to the subject



honorification test. The following example, however, suggests that the two NPs do not have exactly the same force in honorific agreement:

- (33) ce sensayng-nim-i atul-hon-i aphu-(\*si)-ta  
 that teacher-HON-NM son-CON-NM sick-(\*HON)  
 'That teacher's son is (\*esteemedly) sick.'

Honorification of the first NP is not enough to trigger the verbal honorific agreement when the second NP is 'contempted', as in (33). This fact might be taken to suggest a closer connection between the second NP and the verb in DSCs. Therefore, as for the DSCs involving adjectival verbs, Park's (1982: 652) claim seems to be on the right track: given a sequence, NP<sub>1</sub>-NP<sub>2</sub>-V, as a sentence, NP<sub>1</sub> is the subject, and the sequence NP<sub>2</sub>-V (which constitutes a sentence whose subject is NP<sub>2</sub>) functions as a predicate of NP<sub>1</sub>.

Now the question is how it is possible for a sentence to become a predicate. Park (1973, 1982) takes the 'aboutness' relation as the defining character of a predicate such that a predicate expresses a property of the subject of the sentence. Thus, according to Park, any sequence, be it sentential or phrasal, can be a predicate. The 'aboutness' requirement for being a predicate is however pragmatically oriented, and there is no independent syntactic test for 'aboutness'.

Yim (1984) takes virtually the same view as Park. Within a predication theory of Williams (1980, 1983), Yim defines S(sentence) to be the subject-predicate relation in which the predicate is INFL' (i.e. INFL single bar). He then goes on to claim that an INFL" (i.e. S) can also function as a predicate. His claim is not, however, based on any strong morphosyntactic evidence. Instead, he proposes a general bar notation principle, as in (34).

- (34) X-bar Transparency: A syntactic relation (with an external element) holds through any number of branching nodes of the same category type with immediate dominance between them or with the same head.

He does not, however, discuss how general his X-bar principle is.

I will not take any definite stance on the predicatehood of a sentence in general. I only provide a piece of syntactic evidence that the embedded S in DSCs indeed acts like other VPs with respect to coordination. It is generally assumed that coordination involves syntactic categories of the same type. Then, the following example, in which a VP is coordinated with a sentence with an adjectival predicate, indicates that the VP and the sentence share the same syntactic category of some sort:

- (35) a. Mary-ka [<sub>VP</sub> yeppu]-ko [<sub>S</sub> tali-ka kil ]-ta  
           -NM   pretty-and   leg-NM long-DEC  
           'Mary is pretty and long-legged.'  
       b. [<sub>VP</sub> yeppu]-ko [<sub>S</sub> tali-ka kil]-n   Mary-ka kyengcu-ese iki-ass-ta  
           pretty-and   leg-NM long-REL   -NM race-LOC win-PAST  
           'Mary who was pretty and long-legged won the race.'

After all, the sentential predicate in DSCs is similar to the sentential 'comment' in topic-comment constructions. Thus we may assume that the existence of DSCs and the sentential predicates is one of the properties of 'topic prominent' languages like Korean.

### 3.3.2. Subject honorification and the psychological verb construction

As noted earlier, there is another class of double nominative constructions in Korean. This second class involves a kind of transitive verb (i.e. so-called psychological verbs) such as *silh* 'dislike', which requires its argument NP to be in the nominative case, as in (36).

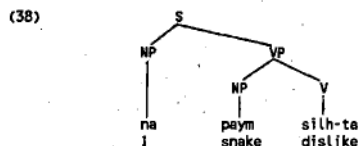
- (36) a. *nay-ka paym-i musep/silh/coh-ta*  
 I-NM snake-NM afraid-of/dislike/like  
 'I am afraid of/dislike/like snakes.'
- b. *John-i paym-i silh-unkepota*  
 -NM snake-NM dislike-seem  
 'It seems that John dislikes snakes'

These psychological verb constructions (hereafter PVC) apparently look like the typical DSCs involving adjectival verbs in that the verbs are preceded by two nominative NPs. However, unlike typical DSCs, a 'possessor-possessed' relationship between the two NPs is not found in PVCs. Moreover, the second NP in PVCs such as those in (36) does not bear any of the properties typically associated with syntactic subject NPs, except for its nominative case marking.

Subject honorification provides crucial evidence that the second NP is not a subject. In the following examples, it is always the first NP that triggers the verbal honorific agreement; honorification of the second NP has no effect on the verbal agreement:

- (37) a. *nay-ka ce sensayng-nim-i silh-(\*usi)-ta*  
 I-NM that teacher-HON-NM dislike-(\*HON)  
 'I (\*esteemedly) dislike the teacher.'
- b. *ku sensayng-nim-i paym-i silh-usi-unka-pota*  
 the teacher-HON-NM snake-NM dislike-HON-seem  
 'It seems that the teacher (esteemedly) dislikes the snake.'

There is one important constraint on honorification to be noted regarding (37a): the first person pronoun, *na/nay* 'I', never triggers honorific agreement of any sort. Instead, an alternative form, *ce* 'I (polite)', is often used to show speaker's respect to the hearer, by humbling himself. Then, sentences like those in (37) suggest that the second NP in PVCs is the object of the psychological verb, and hence that the second NP and the following verb constitute not a 'sentential predicate' but a VP, as in (38):



The nominative case of the second NP must therefore be attributed to an idiosyncratic property of the psychological verb, and must not be confused with the grammatical relation of subject. However it is not simply the semantic type of the psychological verb which is responsible for the nominative case of the object NP. That is because there are some 'complex' verbs which belong, semantically, to the same class of psychological verbs, but assign their objects accusative case, as in (39):

- (39) a. *nay-ka paym-ul/\*i musep/silh/coh-a ha-n-ta*  
 I-NM snake-ACC/\*NM afraid-of/dislike/like-PRSNT  
 'I am afraid of/dislike/like snakes.'
- b. *John-i paym-ul/\*i silh-a ha-nunka pota*  
 -NM snake-ACC/\*NM dislike seem  
 'It seems that John dislikes snakes'

Truth-conditionally, the sentences in (36) and (39) have the same meaning. The sentences in (39) differ from those in (36) only in the casemarking of the second NPs, and the corresponding forms of the verbs: each verb in (39) is followed by *-a ha*, which does not seem

to have any internal semantics but only serves to derive nonadjectival forms of the corresponding psychological verbs. This is evidenced by their occurrence in imperative sentences, in progressive aspect, and in present tense, unlike the corresponding adjectival verbs:

- (40) a. *paym-ul/\*i coh/silh/musep-a ha-ala*  
 snake-ACC/\*NM like/dislike/afraid-IMP  
 'Like/Dislike/Be-fond-of snakes !'
- b. *John-i paym-ul/\*i coh/silh/musep-a ha ko-iss-ta*  
 -NM snake-ACC/\*NM like/dislike/afraid PROG-DEC  
 'John likes/dislikes/is-afraid-of snakes now.'
- c. *John-i paym-ul/\*i coh/silh/musep-a ha-un-ta*  
 -NM snake-ACC/\*NM like/dislike/afraid-PRSNT-DEC  
 'John likes/dislikes/is-afraid-of snakes.'

In section 3.1, it was noted that stativity is one of the characteristics of adjectival verbs, and that adjectival verbs are distinguished from other verbs in their inflectional and derivational paradigms: i) in the present tense, most verbs are marked by a suffix *un/nun*, while adjectival verbs are zero-marked; ii) adjectival predicates can be directly modified by adverbs like *kacang* 'most' to form periphrastic superlative expressions, while other nonadjectival verbs cannot; iii) adjectival verbs can be turned into adverbs by suffixation. Psychological verbs share all of these properties with adjectival verbs. Thus psychological verbs may be defined as transitive adjectival verbs, and their feature specification is [+N, +V, \_NP[NM]].

These facts then suggest that the case marking (i.e. ACC/NM) of an object NP must be sensitive to the adjectival nature of the governing verb, i.e. the features [+N, +V]: adjectival verbs govern a nominative object, whereas other transitive verbs govern an accusative object. This adjectival feature of verbs plays a more interesting role in the case assignment within a multi-verb construction in which one adjectival verb combines with a nonadjectival transitive verb, as discussed in the following section.

#### 4. The alternative case marking in 'VP + sip' constructions

Now we can extend our analysis of case assignment in the previous sections to a marked case assignment in which an NP is assigned alternative cases in apparently the same configuration. It has been noted in the previous discussion that in a given syntactic configuration, an NP is assigned a unique case, e.g. nominative, accusative, etc. Even though syntactically assigned cases can be replaced by pragmatically controlled topic markers, this interaction between syntax and pragmatics must be understood independently of the unique case assignment in syntax.

Then examples like (41a) pose a problem since they involve an alternation between accusative and nominative case marking of the object NP in apparently the same configuration:

- (41) a. *ney-ka piano-lul/ka chi-ko sip-ass-ta*  
 1-NM -ACC/NM play-INF want-PAST  
 'I wanted to play the piano.'
- b. *ney-ka piano-lul/\*ka chi-ass-ta*  
 1-NM -ACC/\*NM play-PAST  
 'I played the piano.'

*Chi* 'play' is a typical transitive verb which governs an accusative object, as in (41b). But when it is followed by the verb *sip* 'want', the object NP shows the case alternation in (41a).

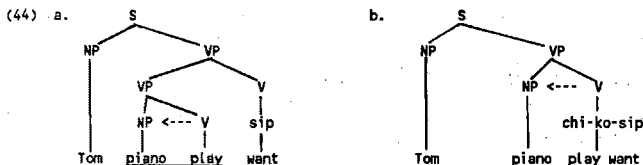
On the other hand, the desiderative verb sip is subcategorized for a VP; it cannot directly take an object NP, regardless of the case marking of the object, as shown in (42):

- (42) a. \*John-i cha-lul sip-ta  
 -NM car-ACC want  
 'John wants a car.'  
 b. \*John-i cha-ka sip-ta  
 -NM car-NM want  
 'John wants a car.'

Sip is another adjectival verb: it is zero-marked in present tense, and it cannot occur with progressive aspect or in the imperative, as in the following examples:

- (43) a. \*piano-lul/ka chi-ko sip-\*a  
 -ACC/NM play want-IMP  
 'Want to play the piano.'  
 b. \*Tom-un piano-lul/ka chi-ko sip-ko iss-ta  
 -TP -ACC/NM play want PROG  
 'Tom is wanting to play the piano.'  
 c. \*Tom-un piano-lul/ka chi-ko sip-o/un-ta  
 -TP -ACC/NM play want-PRSNT-DEC  
 'Tom is wanting to play the piano.'

The case alternation in sentences like (41a) seems to be also attributed to the adjectival nature of the verb sip. As noted in the previous discussion of the PVC, transitive adjectival verbs assign their object NPs the nominative case. If sip is assumed to lexically combine with a transitive verb to derive an adjectival compound verb, the case alternation would be accounted for as a result of structural ambiguity as represented in (44):



The object NP is assigned [CASE:ACC] in the structure (44a) by the transitive verb chi 'play'; it will be assigned [CASE:NM] in the structure (44b) by the adjectival compound verb, chi ko sip 'want-to-play'.

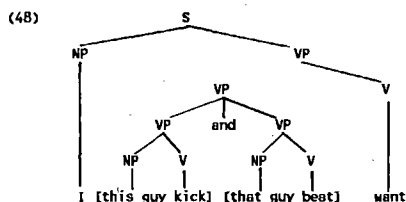
If this assumption is correct, the alternative case marking is predicted to occur only when the lexical analysis is not blocked for some syntactic reason. This prediction is borne out by the following examples, in which sip combines with a coordinated VP (each conjunct is underlined):

- (45) na-nun i nom-ul/\*i ketecha-ass-ta  
 I-TP this guy-ACC/\*NM kick-PAST  
 'I kicked this guy.'  
 (46) na-nun i nom-ul/i ketecha-ko sip-ta  
 I-TP this guy-ACC/NM kick-INF want  
 'I want to kick this guy.'

- (47) a. na-nun i nom-ul/\*i ketecha-ko ce nom-ul/\*i cwiepak-ko sip-ta.  
 I-TP this guy-ACC/\*NM kick and that guy-ACC/\*NM beat-INF want  
 'I want to kick this guy and beat that guy.'
- b. \*na-nun i nom-\*i ketecha-ko ce nom-ul cwiepak-ko sipta.  
 I-TP this guy-NM kick and that guy-ACC beat-INF want
- c. \*na-nun i nom-ul ketecha-ko ce nom-\*i cwiepak-ko sipta.  
 I-TP this guy-ACC kick and that guy-NM beat-INF want

Ketecha 'kick', and cwiepak 'beat' are typical transitive verbs governing an accusative object, as in (45). When they are followed by sip, however, the object NP shows alternative case marking, as in (46). On the other hand, when the coordinated VP combines with sip, as in (47), the object NP of each conjunct VP does not show such case alternation; it must be marked accusative.

This fact about case marking is naturally accounted for under the assumption that the alternative case marking is due to the structural ambiguity represented in (44). Sentence (47) cannot be structurally ambiguous: the verbs ketecha 'kick' and cwiepak 'beat' in the VP conjuncts are not syntactically adjacent to the verb sip 'want', as represented below in (48). In configurations like (48), a lexical compounding across the constituent boundaries is ruled out, and hence the object NPs cannot be assigned nominative case:



Thus the alternative case marking is accounted for by reference to the adjectival feature [+N, +V] of the verb sip and the lexical compounding process resulting in surface structural ambiguity. However the nature of the lexical compounding process has not been explicitly presented so far. It has been simply assumed that syntactically, sip is subcategorized for a VP, but lexically, it can combine with a nonadjectival verb to derive an adjectival compound verb. It should be noted, however, that the lexical process is not simply a concatenation of the two input categories: the subcategorization of the input category is not preserved in the output. For instance, a transitive verb like chi 'play' governs an accusative object, but when it combines with sip, the resulting compound verb it governs a nominative object.

The above analysis of case assignment cannot be completed unless the nature of the feature changing derivation and its interaction with case marking are specified. In the next section, I will examine how such interactions can be explicitly represented in a categorial grammar framework.

## 5. A categorial analysis of the alternative case marking constructions

In the following discussion, readers are assumed to be familiar with generalized categorial grammar, and only a fragment of the theory will be sketched (to the extent that it is relevant to the analysis of the case assignment in Korean). For a more detailed introduction to categorial grammar, readers are referred to Bach (1983, 1988), Dowty (1988), and Steedman (1987) among others.

In categorial grammar, linguistic expressions are regarded as functors and arguments, both syntactically and semantically, assuming a uniform correspondence between syntax and semantics. A set of operations combine these categories (i.e. functors and arguments) into larger expressions until a full sentence is derived. The principal operation is 'functional application' (FA), which simply involves applying the functor category to the argument category. Thus functional application, defined as in (49), can be schematically represented as in (50):

- (49) Functional Application: (Steedman 1987)  
A function of category  $X/Y$  or  $X\backslash Y$  with interpretation  $f$  can combine with an adjacent argument  $Y$  with interpretation  $a$  to yield a result of category  $X$  with interpretation  $f(a)$ .

- (50) a.  $X/Y + Y \Rightarrow X$   
b.  $Y + X\backslash Y \Rightarrow X$

Another operation is 'functional composition' (FC) which is defined as in (51), and schematically represented in (52):

- (51) Functional Composition: (Steedman 1987)  
A function of category  $X/Y$  or  $X\backslash Y$  with interpretation  $f$  may combine with an adjacent function of category  $Y/Z$  or  $Y\backslash Z$  with interpretation  $g$ . The result is their syntactic and semantic composition, a function  $X/Z$  or  $X\backslash Z$  with interpretation  $f.g$ .

- (52)  $X/Y + Y/Z \Rightarrow X/Z$   
 $Y\backslash Z + X\backslash Y \Rightarrow X\backslash Z$

Thus functional composition combines a functor category with another functor category to derive a composite functor. Therefore, the lexical process deriving a compound verb out of two verbs can be easily analyzed as a case of functional composition in the lexicon, since verbs are of functor categories. And some aspects of the alternative case assignment in Korean sketched in the previous section can be more explicitly articulated in a categorial grammar framework.

First of all, CASE is a morphosyntactic feature defined for an argument category, and its feature value is governed by a particular functor category such as a transitive verb. The usual way that 'government' is handled in categorial grammar is that a functor  $A/B$  which governs a particular feature [+F] on its argument  $B$  is, in effect, analyzed as being of category  $A/B[+F]$  (cf. Bach 1983). Thus, if transitive verbs govern an accusative object, their category is  $VP\backslash NP[ACC]$ . As noted in the previous sections, however, some adjectival transitive verbs in Korean (e.g. psychological verbs like *silh* 'dislike') govern a nominative object. Therefore such verbs are actually analyzed as being of category  $VP[+N, +V]\backslash NP[NM]$ . In the following discussion, adjectival verbs will be represented as 'AP', for ease of reference. Thus, an adjectival transitive verb is  $AP\backslash NP[NM]$ .

Given this categorization, the lexical process combining a transitive verb like *mek* 'eat' and the desiderative verb *sip* may be analyzed as in (53), using the operation of functional composition. The category of *sip* will be taken as  $AP\backslash VP$ , as was motivated previously.

- (53) 

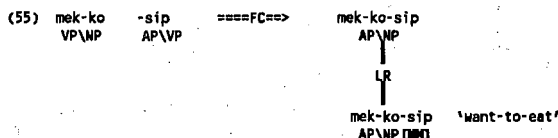
mek-ko	-sip	===FC==>	mek-ko-sip	'want-to-eat'
VP\NP[ACC]	AP\VP		AP\NP[ACC]	

However, the result category  $AP\backslash NP[ACC]$  will govern an accusative object against our expectation: the compound verb is expected to govern a nominative object, leading to the effect of apparent case alternation in the surface structure. What is missing in the above analysis is the generalization made in the previous sections that all adjectival transitive verbs govern a nominative object. We can accommodate that generalization by stipulating the following lexical redundancy rules:

## (54) Lexical Redundancy Rules

- a.  $AP \backslash NP \Rightarrow AP \backslash NP [NM]$   
 b.  $VP \backslash NP \Rightarrow VP \backslash NP [ACC]$

In other words, no transitive verbs are specified in their lexical category for the government feature value of [CASE:NM] or [CASE:ACC]; the government feature values are determined by the general lexical redundancy rules. Given these redundancy rules (LRs), the lexical compounding process in (53) is reanalyzed as follows:

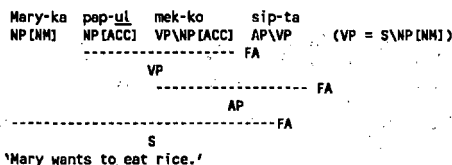


In (55), the lexical redundancy rule (54a) applies to the derived compound verb (i.e. the result category of the functional composition), and ensures that it governs [CASE:NM] rather than [CASE:ACC] on its object.

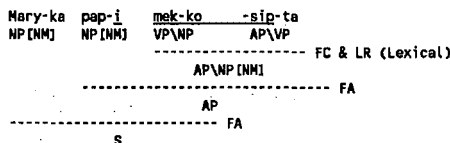
Now the alternative case assignment illustrated in (56) is accounted for by the two distinct derivations in (57):

- (56) Mary-ka pap-ul/i mek-ko sip-ta.  
 -NM rice-ACC/NM eat-INF want  
 'Mary wants to eat rice.'

## (57) a. Accusative Case Assignment by Functional Application



## b. Nominative Case Assignment by Functional Composition



In (57a) the transitive verb mek assigns the accusative case to its object, through the regular syntactic operation, i.e. functional application. In (57b), after the application of functional composition and a lexical redundancy rule in the lexicon, the compound verb mek-ko-sip (AP \ NP[NM]) assigns the nominative case to its object.

Thus the alternative case marking can be explicitly accounted for in a categorial grammar by appealing both to the operation of functional composition in the lexicon and to lexical redundancy rules.

## 7. Closing statement

So far I have presented two interesting problems about Korean morphosyntax: (i) the double occurrences of nominative case in the so-called DSCs/DNCs, and (ii) the alternative case assignment in the 'VP + sip' construction. The adjectival category feature set [+N, +V] was noted to play a crucial role in the analysis of both problems.

DSCs are analyzed as a proper subset of DNCs: both nominative NPs behave as subjects with respect to subject honorification, and they must contain adjectival intransitive verbs. These characteristics distinguish DSCs from topic constructions, on one hand, and from other DNCs, on the other. Topic constructions does not impose any categorial constraint on the verbs involved. The second nominative NP in the other DNCs (e.g. psychological verb construction) is analyzed as the object NP of the verbs, their nominative marking being attributed to the adjectival category of the verbs. The alternative case assignment in the 'VP + sip' construction is also analyzed as a result of the interaction between surface structural ambiguity and the adjectival category of the verb sip.

The role of adjectival verbs in syntax has not been well appreciated in most studies of Korean. In this paper, it was pointed out that there is a significant relation between case assignment and adjectival verbs. However, the analysis of the 'VP + sip' construction requires a much broader investigation of similar constructions. In fact, there are many multi-verb constructions in Korean whose nature is scarcely understood. Most multi-verb constructions involve changes in the subcategory features of one of the element verbs, as in the 'VP + sip' construction. I believe that a careful examination of such multi-verb constructions will provide a more revealing account of case assignment in Korean.

## Notes

\*This paper is a revision of a paper which was originally written for the seminar on inflectional morphology offered by Arnold M. Zwicky at The Ohio State University in the spring of 1988. I am much indebted to Arnold M. Zwicky, who read the earliest version of this paper and offered valuable comments, and to David R. Dowty, who also read an earlier version and offered insightful criticism on the categorial analysis. I have benefited from discussions with Joyce Powers and Uma Subramanian, not to mention their editorial help. They are, of course, in no way responsible for what I have made of their advice.

### 1. List of Abbreviations:

ACC: Accusative, GEN: Genitive, NM: Nominative, IMP: Imperative, PAST: Past Tense, PRSNT: Present, PROG: Progressive aspect, TP: Topic marker, REL: Relativizer, INF: Infinitive, DEC: Declarative.

Yale Romanization system is used for the transcription of Korean expressions throughout the paper. Korean sentences end with a verbal particle which indicates the sentence types (e.g. declarative, imperative, etc). Unless distinction between sentence types are relevant to the corresponding discussion, the gloss for such particles will not be provided.

2. Korean has various conjunctions and disjunctions which are distinguished by the syntactic categories of conjuncts, i.e. NP conjunctions (e.g. wa, hako, lang) and VP-conjunctions (e.g. ko).

3. On the distinction between morphological rules and operations, see Zwicky (1987, 1988).

4. The nominative case marking of the predicate NP is not found in the affirmative counterpart of the following sentence:



John-i paksa i-ta  
 -NM doctor is  
 'John is a doctor.'

Park (1973) argues that the predicate NPs of the affirmative equational sentences are also nominative-case marked in the deep structure, but undergo obligatory nominative case marker deletion. However, Park's entire argument here is very weak. We might accommodate this fact simply by stipulating that only derived negative copular verbs require their predicate NPs to be in the nominative case.

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